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THE PLANT DISEASE REPORTER

Continuation of

THE PLANT DISEASE BULLETIN

Issued By

THE PLANT DISEASE SURVEY

Volume VII Number 10

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BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

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Vol. VII November 1, 1923 Number 10

ANNUAL REPORTS DUE NOVEMBER 1 AND DECEMBER 1

Collaborators and cooperators are reminded that the annual report on cereal diseases is due November 1. A considerable number has already been received, but it looks as if at least several reports would be late in arriving at the Washington office.

Don't forget the crop loss estimates. We want especially to get, as soon as possible, and from as large a number of persons as we can, estimates of losses from stem rust of wheat.

The annual report on the diseases of other crops, namely: fruits, vegetables, ornamentals, trees, etc., has not been requested of chief collaborators as yet, but formal requests will be made in the near future. This report is due December 1, and it is hoped that all will make an effort to have a good report in by that time.

Specimens of the less common or rare diseases are desired to substantiate reports.

CLOVER ROOT ROT

CLOVER YIELD INCREASED ON STERILIZED SOIL IN KENTUCKY

L. W. Fergus and W. D. Valleau of the Kentucky Agricultural Experiment Station have obtained some information concerning the importance of root rot of red clover. In a report dated October 15, they write as follows:

"A plot of ground was steamed under a pan and another plot left unsteamed. Red clover was sowed in both last spring. The clover in steamed soil made rapid growth and grew nearly knee high by the middle of summer when it blossomed and was then mowed down. That in unsteamed soil made very slow growth and was only a few inches high when mowed. That in steamed soil has again grown up about knee high whereas the other is only a few inches. The roots of the steamed are healthy and normal down five inches (the depth of penetration of the steam) beyond which they have few laterals but

numerous rotted stubs of laterals and considerable discoloration of the main roots. Those in unsteamed soil show this condition throughout."

NORTH CAROLINA CABBAGE DISEASES

G. W. Fant, Extension Pathologist with the North Carolina State College of Agriculture writes as follows concerning cabbage diseases in North Carolina as of October 25:

"Cabbage in the western part of North Carolina suffered considerably from blackleg and club-root. In the kraut sections where cabbage is being grown extensively, these diseases are worse, which is no doubt due to insufficient rotation of crops. The yellows disease does not appear to be very prevalent this year, and is not causing such losses as are being produced by club-root and blackleg."

WISCONSIN REPORTS ON CABBAGE DISEASES

The following reports, dated October 15, were received from R. E. Vaughan:

Black rot caused by Bacterium campestre:

Widely distributed; loss usually minor. Heavy losses in a few fields. Practically no loss where seed was treated with corrosive sublimate.

Black-leg caused by Phoma lingam:

Widespread. Loss minor, less than usual.

Stump rot caused by soft rot bacteria:

Less than usual.

Bursting caused by weather conditions:

Continued rains and warm weather after Hollander cabbage should have been stored has resulted in more loss from bursting than usual. Some financial loss because cabbage was forced on the market.

NEW JERSEY SPINACH SUFFERS FROM DISEASE

"About September 20 to 25 there appeared a severe form of damping-off in a large number of spinach fields in various parts of New Jersey, in some cases causing loss of complete fields. The disease attacked seedlings and old plants alike, the greatest damage being done to a few fields which were about ready to cut.

"In seedlings the disease was a typical 'damping-off'. In larger plants the infection seemed to take place on the petioles of the older leaves, often working its way down the petiole to the crown and roots. The diseased petioles frequently took on a very dark or almost black appearance and remained firm for some time or else they were rapidly decayed without a blackening. In many plants only a few of the lower leaves were affected, but, as a rule, the disease progressed to the crown causing the collapse of the whole plant.

"Many diseased plants were examined and a Pythium was constantly found associated with the trouble." (C. M. Haenseler, September 20-25)

Mr. F. C. Meier of the Office of Cotton, Truck, and Forage Crop Disease Investigations, observed a similar trouble this summer in a field of spinach near St. Paul, Minnesota. Collaborators are asked to report any similar observations to the Plant Disease Survey.

COTTON DISEASES IN ALABAMA, 1923

Under date of October 15, L. E. Miles reports on the following cotton diseases:

Anthracnose caused by Glomerella gossypii:

Cook 1010 badly affected. In certain fields in northern part of state 80% of bolls rotted. Average loss for that section 40% on this variety. In central and southern parts of state less severe, but more prevalent than in average seasons.

Wilt caused by Fusarium vasinfectum:

General over state but as a rule not serious. Average loss 3%. In local instances, however, was found causing loss of 75%. In adjoining properties loss was as high as 40%. Seed in these instances was of a Cook variety.

Angular leaf spot caused by Bacterium malvacearum:

General but unimportant.

Root knot caused by Heterodera radicicola:

More general than is commonly assumed. Loss difficult to estimate, though cotton suffers severely on some of the light sandy soils.

OUTBREAK OF POWDERY MILDEW OF GRAPE IN CALIFORNIA

California grapes on the market have been showing more powdery mildew than usual this year. Inspectors in the Fruit and Vegetable Inspections Service report a greater abundance of this disease on California grapes, both at the shipping point and destination.

The situation in California vineyards is indicated in the accompanying report from W. T. Horne of the University of California:

> "There has been an extraordinary outbreak of powdery mildew throughout the San Joaquin valley during the present season, induced evidently by unseasonably cool weather after the fruit was well set and lasting into early summer. Dropping of small berries, etching and cracking and drying of fruit has started. Sulphur dust was not always effective for control. Presumably trouble is general over state."

REPORTS OF ALABAMA PECAN DISEASES

Under date of October 15, L. E. Miles reports the following diseases of pecan:

Scab caused by Fusicladium effusum:

> Very serious on Delmas, Schley, Pabst, Alley, and Van Deman. Good control by Bordeaux mixture. Few growers spraying. Loss in Delmas. Schley, Pabst, and Van Deman almost 100% in many instances. Average loss in state probably 10%.

Brown leaf spot caused by Cercospora fusca:

> Developing in late summer in most orchards. Serious defoliation in closely planted or poorly cared for trees. Spraying for scab gives complete control of this trouble.

Anthracnose caused by Glomerella cingulata:

> Attack late in season. Little loss incurred. Causing some anxiety to growers where scab is not present, since they confuse it with the latter trouble.

Nursery blight caused by Phyllosticta caryae:

> General present in pecan nurseries on seedling stock. Sometimes found in poorly cared for orchards.

Rosette (non-parasitic):

> Generally associated with soils lacking in humus and consequent low water holding capacity. One orchard, 20 acres, 4 year old trees, 93% rosetted. Average reduction in yield probably 5%.

Kernel-spot (non-parasitic):

> Reported as severe in two orchards where cowpeas grown as cover crop. Generally of but slight importance.

KANSAS AND CALIFORNIA REPORT ON APPLE DISEASES

Kansas: Blotch caused by Phyllosticta solitaria - The commercial grower has this well under control when he can spray. Bordeaux used effectively against it. Unsprayed orchards or poorly sprayed orchards show 30 to 100% loss from this disease. Counts on sprayed blocks show petal-fall spray of lime-sulphur had some effect in checking blotch.

Sooty blotch - This injury and fly-speck are quite common this year. In many cases it has prevented the barreling of choice fruit. Hillsides practically free while hollows show heavy infection.

Spray-burn, due to Bordeaux mixture - No cases of severe spray-burn or russeting reported in spite of the fact that cold wet weather prevailed in some sections this summer. Stone lime and hydrated lime both used successfully. (E. A. Stokdyk, Oct. 15)

California: Blight caused by Bacillus amylovorus - Blight is common and presumably occurs in all parts of the state with warm summers. The central and north coast districts with cool summers either do not have blight or it is not important. (W. T. Horne, July 1)

Monilia rot caused by Sclerotinia cinerea - Observed locally in Sonoma Co. on Alexander apples causing rot of clusters apparently starting in injuries of codling larvae. Not abundant nor general in the Gravenstein orchards of this district.(W. T. Horne, Aug. 1)

Sappy bark caused by Polystictus versicolor - Observed in Napa Co. on Gravenstein variety in a phase resembling slime flux. Abundant and very injurious throughout the coast districts of California. (W. T. Horne, July 1).

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